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Generation of Divine Image-Sri Yantra

B. Santhi, N. Rajesh Kumar, C. Bharathy and R. Bala Krishnan
School of Computing, Sastra University, Tamil Nadu, India

Abstract: Sri Yantra is one of the most auspicious, important and powerful Yantras, which not only gives the maximum benefit, but also proves beneficial for almost everybody. The traditional methods for drawing Sri Yantra are complex. It is very difficult to obtain Sri Yantra with full accuracy. The objective of this study is to define algorithmic approach for generating Sri Yantra with maximum accuracy. The accuracy is measured through the parameters like Concurrency, Concentricity and Equilateral. It is the source of attaining all worldly desires and fulfilling all wishes through inner cosmic power and mental strength. "Sri Yantra" - Sri means wealth and Yantra-means "Instrument"-"The Instrument for Wealth". The Instrument for Wealth the Sri Yantra brings about material and spiritual wealth Sri Yantra blesses the worshiper with peace, happiness, popularity, power, authority, wealth, prosperity and success. Leaders and men in authority should use this Yantra for attaining fame, power and financial benefits. Sri Yantra is definitely the answer to all the problems and negativity in our life. Existing edition of seven by seven grids had erroneous descriptions Sri Yantra, according to the latest English translation. Unfortunately, that one two is marred with errors in diagrams and unclear reference to inside-out construction instructions for the drawing of the triangular central pattern. There is no systematic approach to draw a traditional Sri Yantra. The methods used to generate Yantra in previous studies are approximate and not producing accurate design. This study presents a clear algorithmic approach to construct the Sri Yantra. This study mainly focuses to produce highest level of accuracy and construct the optimal configuration of Sri Yantra.

Key words: Bindu, mahameru, mandalas, shakti chakra, sri yantra

INTRODUCTION

The Sri Yantra is the queen of all Yantras. It is also called as Sri Chakra. It is the symbolic representation and the two-dimensional view of the golden-coloured mystical mountain called Mahameru. The Mahameru or Sri Meru chakra is a three dimensional projection of the great Yantra, said to be the mother of all Mandalas. Sri Yantra is a technology of the absolute, skilfully fashioned in divinity's own self image.

The Sri Chakra is beautiful and complex sacred geometry used for worship, devotion and meditation. The Sri Yantra is the king of power diagrams and describes its energetic effect as seventy times greater than pyramid construction. Three centimetres Sri Yantra possesses a greater energetic effect than a two metre pyramid. This energetic power depends upon its exact geometry elements. The Sri Yantra includes various geometry elements, complex and detailed symbols like squares, triangles, circles and floral patterns (Bolton and Macleod, 1997).

The Sri Yantra consists of three concentric parts. The interpenetrating triangles symmetric in its vertical central axis, contains both upward and downward pointing triangles.

The upward-pointing triangles are called VAHNI, symbolizing the male element ("Pursha") and downward-pointing triangles are called SAKTHI, symbolizing the female element ("Prakriti") of divinity.

There are four of the male triangles represent Lord Shiva or the Masculine and Five of the female triangles represent Shakti or the Feminine. Sri Yantra also represents the union of Masculine and Feminine divine. It is also known as Navayoni Chakra (Gerard, 1990).

Together the nine triangles are interlaced in such a way as to form 43 smaller triangles in a web symbolic of the entire cosmos or a womb symbolic of creation.

The two concentric circles represent a regular lotus design. The inner pattern has a period of 8 petals and the outer pattern has a period of 16 petals. The petals symbolize the sanctity of the inner diagram, used in Yoga meditation as a linear Yantra (Aditya, 1994).

The triangles and petals are surrounded by an earth square resembling a temple with four doors. The original edition of Zimmer (Heinrich, 1926) had erroneous descriptions, less concurrency, less concentricity and poor geometrical structure. They look like a free hand drawing methods.

There is no systematic approach to construct the Sri Yantra based on the fixed position of the centre (bindu).

Corresponding Author: N. Rajesh Kumar, School of Computing, Sastra University, Tamil Nadu, India

inside it (Sudarshan Raj Tiwari, 2011; Alexey and Ramendic, 1989). This study focuses to draw the traditional Sri Yantra structure based on analysis of classical Tantra literature.

This algorithm offers the highest level of accuracy, equal balance centre of mass which will be defined in the following section.

Veneration principles of Sri Yantra: The Sri Yantra architecture is based on the ancient Vedic Science of India. It removes all the unconstructive vibrations and adds constructive celestial energies into our surroundings.

By nature it picks up scrupulous cosmic ray wave emit by the planets and other universal objects and convert them into positive vibrations. So we place this Yantra in our workplace, study centre, home or anywhere, but it needs to be in a location where we spend our maximum time.

LITERATURE REVIEW

In this section, this study is focused various existing Sri Yantra generation schemes and its construction rules.

Introduction to the existing yantra generation schemes: Ritual specifications of the composition of nine intersecting triangles central to the diagram *Sri-chakra* require that the triangles be laid out such as to make twenty-four triple intersections. The deceptively simple geometry demands impossibly huge number of computational steps when modern mathematics is applied to 'solve it'. Geometrically accurate traditional drawing of *Sri-chakra* is not available. Instructions noted in ancient commentaries are also only approximate and do not give accurate results; instructions appear even cryptic and coded. In recent times, renewed interest in the diagram as an object of meditation has led to fresh research on it seeking 'accurate constructs' based on comparative analysis of sacred geometry of east and west. Such researches have often assumed the diagram to be either as just something occult or as an object of religious and magical geometry representing an abstract macrocosm. The functional and physical objective of constructing diagram, which would allow one to judge whether it is correct as well as accurate, has not been considered as yet and this has meant that a true reconstruction of the diagram has remained elusive (Sudarshan, 2011).

Free hand drawing methodology of sri yantra: The *Sri Yantra* as shown here is based on a commentary of Kaivalyasrama on Saundarya-Lahari. It contains the following symbols:

- Bindu
- Circles
- Gates
- Broadening

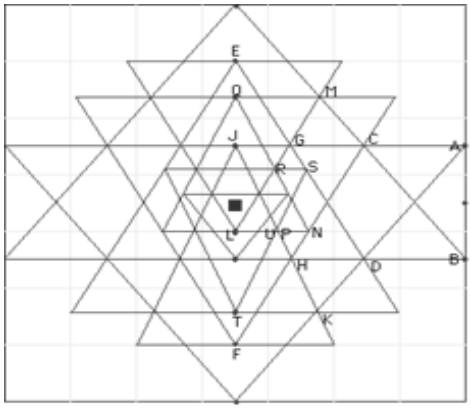

Fig. 1: Seven by seven grid Techniques for Sri Yantra construction

- Sectoring
- Petals generation
- Reference points…

Steps for the yantra creation: Initial process starts from the generation of bindu. The *bindu* symbolizes the divine origin of all creation. Mark this *bindu* with a felt pen. Draw a square around the last circle so that this circle fits exactly into the square. This square symbolizes the gross material aspect of creation. The outer border of this square with its gates will be generated as a parallel work with the inner layer creation process (Subhash, 2005). In order to broaden the boundary, use the outer border of the *Yantra* and draw two additional lines within this border. Then divide the two outer rings into sectors with degrees level of 22.5. Then Petals for the inner circle and middle inner circle will be generated and entire figure will be displayed with triangles which focussed on upward and downward directions respectively.

Seven by seven grid techniques: This simple technique proposed by Bolton and Macleod (1977). The design was first investigated with the assumption that it could fit into a square which it touched at six points with the vertices of the two largest triangles. These triangles, which are assumed to be equal in size, must be drawn first and it then remains to fix three other points, viz. E, F and L which is stated in the Fig. 1.

Identified problems through free hand techniques: While proceeding with the process of free hand Yantra generation techniques, the generated Sri Yantra is not fully completed and most of the time the Yantra will be generated with an approximate structure this will emit some bad frequency of radiations.

The seven by Seven Grid techniques provides less accuracy with results in an error of only 0.2229 % of the length of side of the construction square.

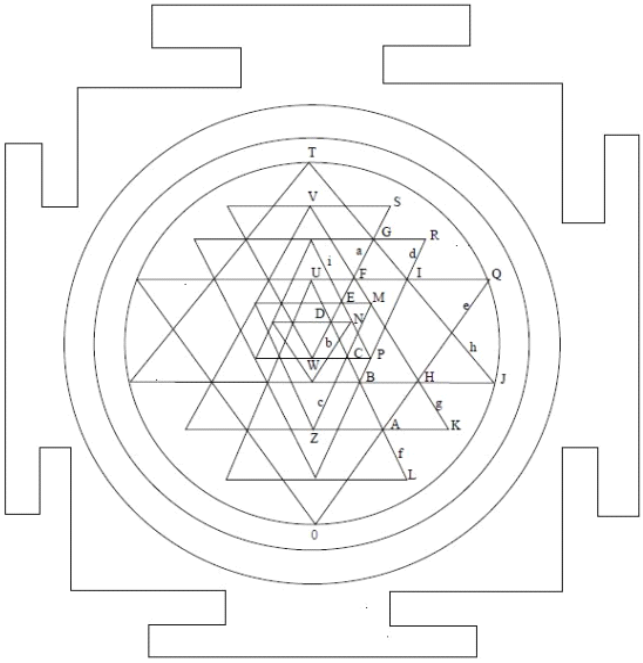

Fig. 2: Approximate Sri Yantra generation

Reasons for the generation of false sri yantra: The Yantra generation process initiated from the bindu position. In the free hand techniques the bindu will be generated without finalizing a central position and without proper radius value for the bindu circle. The next higher level over the bindu is the process of generating triangles over the upward and downward directions, in this kind of free hand approach the triangles will be generated without having relationship with the centre position of the bindu and the triangle will be adjusted sometimes to make the bindu centre or sometimes the generated bindu will be adjusted with the position of the triangles.

This study takes too much of time and this will create a Sri Yantra at the end with some wrong size of values for the triangles over the bindu position. In the exact Sri Yantra everything is mathematical base and on the position of the bindu all the structures over the bindu will be created and structured. This study will results in the wrong Sri Yantra generation and it will results in the wrong impact values and this kind of Yantra will generated wrong or irregular frequency of waves to the environment where it resides.

Kulaichev method: In this mathematical analysis the author compute a system of real coordinate's constraints as follows, α is the inner circle of the diagram.

They selected YQ, XF, YP, XA and YJ as parameters and they got:

YQ × α → Q,	Q & O →e,	Y F= Y Q
YJ × α → J ,	J & T → h ,	XA × e → A
YJ × e → H,	YQ × h → I,	XU = 0
YU = YQ ,	U & A → f	
Y P × f → C,	F & H → g,	0T × g → V
XW = 0,	YW = YP,	F & W → a
a × f → D,	a × h → G,	Y J × f → B
XZ=0,	YZ= YA,	C & Z → e
e × g ---› M,	I & B → d,	d × 0 →Y L
f × YL → L,	d × YP →P,	a × YM→ E
P & E →I,	a × YV → S,	g × YA → K
i × YD → N,	d × YG → R	

The parameters are correct if point (0, YG) is on line i, which gives one extra constraint (Kulaichev, 1984). They obtain a problem with 4 degrees of freedom, which admits of several solutions. However, they have to take into account the further constraints that the various points of the diagrams should be inside the circumscribing circle α ; They have a very shallow range for the 4 real parameters, leading to solutions which are esthetical rather close which is shown in the Fig. 2.

A standard Newton approximation solving of the constraint on G from various initial solutions leads to the following particular solution, where the diameter of circle α is taken as unit length.

Definition classical Sri Yantra is defined as:

YF = 0.668, XF = 0.126, YP = 0.463, XA = 0.187
YJ = 0.398, YL = 0.165, YA = 0.265, YG = 0.769
YV = 0.887, YM = 0.603, YD = 0.551

Newton approximation theorem: Sri Yantra is an under-determined Euclidean plane geometry problem with 4 real parameters, admitting infinity of solutions around the Classical Sri Yantra.

The wider variation of the various solutions is on YL and this obviously affects the esthetic rendering of the diagram and consequently its magic powers. It became clear at this point that a synthetic study of the above solutions was essential in getting a more precise approximation to the traditional diagram (Sastri, 2002; From Vedic science to Vedanta, 1995.) Based on the above free hand technique with various geometrical forms of Sri Yantra generation procedures and their drawbacks are observed, which are listed as follows:

- Inevitability of selecting the "right" location for the generation of bindu
- Poor ranking and optimization of Structures
- The process of adjusting the existing figure or process of backtracking to centre the bindu.
- It generates an error at triple intersection.
- Poor Layout of the Optimal Sri Yantra

To address these identified problems, we have proposed a well-ordered Sri Yantra Generation Technique, which addresses the above said issues and it is also achieve higher degree of accuracy and consumes less amount of generation time than that of existing schemes.

PROPOSED TECHNIQUE

From the previous section, it is observed that various schemes have been proposed to generate a proficient Sri Yantra Structure. The various identified problems have been listed in the previous section. To overcome these identified problems, this research work has designed a well-ordered Sri Yantra Generation Technique, which consists of Sri Yantra Generator Application with various inputs for the generation of the entire structure.

The Sri Yantra generator application is implemented and it receives the inputs for the generation of an entire Sri Yantra structure. The Sri Yantra generator application receives inputs from user to generate Sri Yantra which is demonstrated in the Fig. 3.

Algorithm: Sri Yantra Generation

```
Inputs: BinduPosition(X,Y Axis Value), RadiusValue,DisplayColour.. Output: YantraSol
begin
    YantraSol = { }
    DataSet=FORMATINPUTS
    (BinduLocation,RadiusValue,Colour
    if (VALIDITY(DataSet))//check for dataset validity
        //given dataset is valid
```

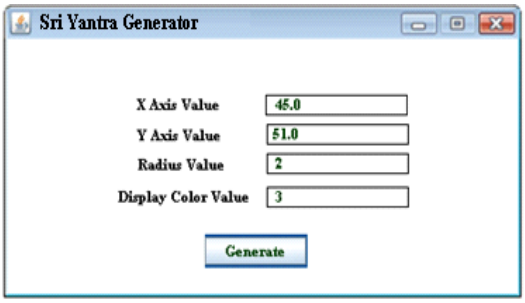

Fig. 3: Initial screen of the Sri Yantra Generator

```
YantraSol = {GenerateBindu (DataSet)};
    //generation of Masculine (Shiva)
    Masculinesize= { 0 }; //initial value
    for (i=1 to M) //M→ No of Updward Triangles
    begin
    XaxisMas=GenerateMasculineAxisvalue (Bindu
        Location, i)
    YaxisMas=GenerateMasculineAxisvalue (Bindu
        Location, i)
    (new)Masculinesize=GenMasculinesize
        ((old)Masculinesize, i)
    YantraSol=GenerateMasculine
        (XaxisMas,YaxisMas, Masculinesize)
    end//generation of Feminine (Shakti)
    Femininesize= { 0 }; //initial value
    for (j=1 to F) //F→ No  of Downward Triangles
    begin
    XaxisFem=GenerateFeminineAxisvalue (Bindu
        Location, j)
    YaxisFem=GenerateFeminineAxisvalue (Bindu
        Location, j)
    (new)Femininesize=GenMasculinesize
            ((old)Femininesize, j)
    YantraSol=GenerateFeminine
        (XaxisFem,YaxisFem, Femininesize)
end
    //Process of Creating Circles
    for(k=1 to T)//T→ No of Circles in the Yantra
    begin //Process of creating three circles
        if (k==1)
            YantraSol= { GenerateCirclewithPetals
                (XaxisFem, YaxisFem, Feminiesixe,
                    XaxisMas, YaxisMas,
                    Masculinesize,bindulocation,
                NoOfPetals) };
else  if(k==2)
    YantraSol= { GenerateCirclewithPetals
        (bindulocation,NoOfPetals) };
    else  YantraSol= { GenerateCircle
        (bindulocation,radius) };
    endif
    end //Process of Temple Creation
```

Fig. 4: Output of Sri Yantra Generator Algorithm

```
YantraSol={ GenTemple
        (bindulocation,Templesize..)};
return  ShowGraph(YantraSol);
endif
end
```

The Proposed Sri Yantra generation algorithm helps to generate the Sri Yantra level by level. In the initial level the location of the bindu is received as input and bindu point is generated then in the next level masculine and feminine will be generated and in the existing free hand approach this masculine and feminine generation process sometimes failed to give accuracy. In the level 3 circles are generated and in the next level petals over the circle is generated and in the final level temple line will be generated.

All the above levels will generated their own structure with the help of the bindu location values and it serves as a reference point to all the structures. Through this Sri Yantra generation algorithm the Sri Yantra is generated level by level and it is stated in the Fig. 4 and in the proposed technique colour is applied only to the Temple generation level of the Sri Yantra.

PERFORMANCE ANALYSIS

Existing popular free hand techniques such as Seven by Seven takes too much of time to generate the Yantra structure and improper configuration is resulted. But the proposed technique produces accurate Sri Yantra in less amount of time. It also achieves the basic key element of the Sri Yantra Mandalas. From the results the charka achieve perfect concurrency, concentricity and equilateral inner triangle.

Experimental Results: We analyze the performance of our proposed approach by the following parameters:

- Execution time
- Number of inputs

From the Fig. 5 it is stated that the proposed approach also generates the Sri Yantra structure through level by

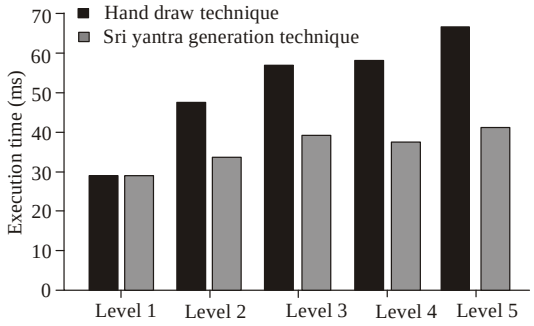

Fig. 5: Evolution of Levels of Sri Yantra Generation

levels but it takes less amount of execution time in each level and it takes limited number of inputs only to generate the entire structure whereas in the existing it needs too many inputs. Hence the proposed approach produces efficient output than that of the existing approach.

CONCLUSION

Our proposed study demonstrates that the existing Free hand techniques of Sri Yantra generation using number of inputs for the creation of each level in the Sri Yantra which consumes more time and results in inaccurate Sri Yantra. The inaccurate Sri Yantra structure emits wrong or irregular frequency of waves to the environment where it resides to address this major issue, we have introduced the Sri Yantra Generation Technique which is the wonderful approach and it provides more benefits for the Yantra Generation schemes. From our experimental results, our work performs better as compared with the existing technique in terms of execution time and number of inputs and it achieves the following things.

- Generating sacred geometry Yantra
- Concurrency
- Concentricity
- Equilateral

However, we realized that this proposed work concentrated only on the 2-Dimensional (2D) view of Sri Yantra without petals on its inner layer (Layer 4), which generating circles and this technique is not focusing on the 3-Dimensional (3D) view (Maha meru structure). This identified limitation could be improved in our future work.

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